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July, 1995

The Gwinnett Amateur Radio Society

Page 1

## The PRESIDENTS PEN

by Howard Gould, W4NVF

Hello to our new members who joined during the Field Day event, which brings us up to 217 members. We are sizable club with enough different interests to satisfy everyone's needs.

We have lost a few members due to relocation and other reasons, and will miss them. Meanwhile the club goes on, generating new interest and exploring new horizons.

My hope is that when the time comes for me to hang up my hat and retire from this very exciting position with the club, we will keep on going like that rabbit commercial we often see who crops up everywhere. (Does Howie remind OU of the Energizer bunny? - ED)

I have learned a lot about what can be done when it comes to jobs that need to be completed for the club. What we are working on for some time now and what seems to be taking forever is the first link for our communications system to be installed at Snellville. We need a commitment from some members to make this remote receiver a reality:

- ► We need experienced climbers capable of installing a large 4-bay array to commit to doing so.
- ► We need someone to commit to loaning us their gin pole, or to take responsibility for reserving, renting, and returning HRO's gin pole for the installation.
- ► We need a ground support team to commit to be available to help with the antenna raising.

Once we get a commitment from these key people, we can set a date for the installation. Please contact me if you can help with this project.

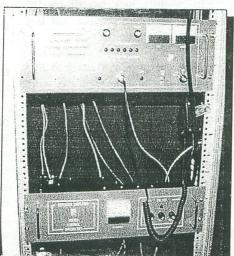
► We also need volunteers to complete grounding projects at both sites. contact me if you can help with this so

we can set a date to complete this project as well.

As far as purchasing new radio equipment, that is a possibility down the road a piece. Yes, our funds look good, but remember operating expenses take a big chunk of that away, and we have other priorities as well.

Due to the size of the membership, it has become impractical to ask any individual to copy the Garzette on a regular basis, and commercial copying, at \$180 to \$250 per issue, would be a large drain on our finances.

Rather than scale back the size of



The Mark-4 is the GARS primary repeater, located at our main site in Lawrenceville. The upper box is the repeater, below it is the amplifier.

our newsletter or publish it less often, the Executive Committee has approved \$600 to \$900 for the purchase of a used commercial grade photocopier to produce the Garzette on.

This should provide a long-term solution to a difficult problem. Our thanks to Jack, KS4LS and Joe, AD4PZ for providing us with a totally free newsletter for over a year-and-a-half making it

(Prez, continued on p.1)

#### Don Button, AJ1T GARS

HAM of the MONTH by J. Pickett Cummins, AD4S

Don is originally from Chatham, NJ where he spent his early years through High School. Don just joined *GARS* earlier this year having just moved to the Atlanta area late last year.

Amateur radio caught Don's interest at a very early age and probably contributed greatly to his career choice later on. He was 11 years old when he got his novice license and became WN2IMD. (Inter-Modulation Distortion..?) He was assisted by his Elmer, W2BZR, "Commander Smith" (retired military and no one knew his first name).

(Ham, continued on p. 3)

## HF....

A Horse of a

# Different Wavelength

by Cheryl McClure, AE4HN

Rookies tend to get in over their heads a lot. But often that's the only way to get where you're going. When I saw how cool HF radios were, I knew I had to have one.

My first solo was not as easy as I expected. I was familiar with 2 meter FM. Once you set your frequency and offset in memory all you do is turn the radio on, key the microphone and talk. I found out quickly that this does NOT apply to HF. You will hear people talk about dipping grids and loading antennas. How does anyone learn this stuff?

(Horse, continued on p.8)

## The GARZETTE

The GARZETTE is the official monthly organ of the Gwinnett Amateur Radio Society serving its members and other persons interested in the advancement of the Amateur Radio art.

Original articles, art and photos are invited and encouraged. Previously copyrighted submissions cannot be accepted for reprinting unless permission from the appropriate publisher is provided in writing along with the information being submitted. If reprints are from publications allowing their unrestricted use, please include a copy of the printed permission contained in the publication.

If possible, submit items in ASCII format by posting a private message to Dean Matthews on the GARS conference of the Scientific Atlanta BBS (806-7372), then use the Save Attached save command, which will prompt you to upload your ASCII file. Art can be accepted in TIFF or PCX format on IBM formatted disk.

Contact the Editor for odd format compatibility, or other means of transfer. Deadline for article submissions is the first Thursday of each month.

GARZETTE EDITOR Dean Matthews, AD4OD Editors Desk: 962-8941 Fax: 339-1394 E-Mail: AD4OD@aol.com

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The tedious and time consuming job of maintaing The GARZETTE mailing list is performed monthly by Membership Chairman Jack Herndon, KS4LS. Joe Biddle, AD4PZ assists with collating, stapling and mailing, and digitally scans in the photo and artwork seen regularly in The GARZETTE. Our thanks to them for all their help in producing The GARZETTE.

The GARS address is:

**GWINNETT AMATEUR RADIO SOCIETY** P.O. BOX 88

LILBURN, GA 30226

In keeping with the amateur spirit, permission is hereby granted for the reproduction of The GARZETTE articles by other amateur club newsletters provided proper credit is given to the individual author and to The GARZETTE.

#### JOIN GARS

Membership dues for 1995-1996 are: \$25.00 for Individual Memberships \$35.00 for Family Memberships Dues reduced for mid-year additions, see membership application for details, or...

Call Jack Herndon, KS4LS at 995-0438 for more information about joining GARS. (Prez, continued from p.1)

possible to, in essence, save enough money to make this move now.

I am pleased to announce that through the efforts of Don, AJIT and his company, Don was able to get them to donate a complete (brand new) 800 mHz Motorola data system repeater, a Decibel Products duplexer, seven portable data terminals and a brand new Celwave antenna. This entire system probably retailed for \$10,000 or more, and though it is not good for any ham band use it has a possible outlet to some commercial user. Our intentions are to sell the equipment for a good price or use whatever we can such as power supplies and components. We need to have anyone who has any inside track with any company that is looking for a good buy on a data system repeater to get in touch with us.

Field Day was a total success with lots of contacts, good food, fellowship, new members, and lots of visitors. The portable tower arrived on time, thanks to the great towing talents of Marty, KE4MLH and went up between the pine trees with a little luck by all on the ground. The beam worked out just fine and we made many a contact on it.

We all saw how great a climber Junior, KE4VWN was as we watched him scramble up this big ole pine tree with his climbing spikes on and nip off a bothersome limb. Great job, Junior.

Since I was fighting a bad virus, I stuck in till around 11:00P.M. and went home. I finished up Sunday from 8 to 2 pounding some brass, still not feeling too spiffy but gladly sticking in till the end.

There were many members who put their time in also. I guess we had a good 25 members show up for operating time.

It was another great experience being out, with the generator running and all the stations going gangbusters. We had a little excitement when the storm came through around 9:00P.M. with all the lightning and rain, and had to shut down for quite a spell. But it gave us all a chance to ragchew and sign up some new members. We had plenty of help thank goodness when it came to shutdown and I was proud to be there with the gang to wrap it all up after the last contact was made.

## GARS **GROWS GREATLY** BY GOLLY!

by Jack Herndon, KS4LS

Four new members were voted in at the June meeting!

Welcome these hams to GARS:

Richard Schaefer, KD4SHS Marty Ernst, KD4HLV Jesse Hein, KE4SZF Robert Bradford, KF4ACZ.

Welcome these new members at the next club meeting or on the air! -ED ◆

Once and a while I receive a letter from a member. I got one this past month and it was not signed, but it came from one of our more newer members and it touches a spot that I have mentioned in the past and will continue to mention as it needs to be said. The sad part about this is that I am the only one to know other than the person who wrote the letter. This is how the story goes:

The writer is listening on the repeater one day and hears one of our other members say he is monitoring. The writer says hello but does not ID his call sign. The other member comes back and says "I don't talk with anyone who does not have a call sign." The writer is so ashamed of himself that he does not respond at all. The writer says that isn't it up to the hams who have a little experience at this game of talking on repeaters to show and tell the newcomers? The writer doesn't think much of the other member who was involved, and he will never know he has offended someone.

In this particular case we have two problems. By the writer not being assertive in coming back and saying "oh I'm sorry, this is so and so with such and such a call", he is letting the other member now firmly believe he had a bootlegger on frequency and that he was right in saying what he did. On the other hand

(Prez, continued on p.3)

(Prez, continued from p.4)

the other member could have said, "I'm sorry but I did not get your call letters could you repeat them for me?", or: "I don't recognize the voice could you repeat your call sign?"; a simple solution to a possible explosive situation.

I've done the same thing, and said something quick, or overreacted to the situation at hand. My last encounter was not on the air thank goodness but still out of place and I was sorry it happened.

When it is on the air it is a different matter because of the personal thing of many listeners being out there and we are all so very protective of ourselves and of what people may think. What we must all do is to try to control our spontaneous speech and put more courtesy into our over the air conversation unless you are very friendly with the station you are talking to and even then it is good practice to avoid harsh comments.

Keep the fun in your conversation as that is a requirement of being a ham and don't forget to give a pause so someone else may join in.

Please put an effort into coming to the *GARS* /Alford picnic on July 22 starting at 10:00AM. A lot of time has been spent on this picnic and I would like to see a great turnout. A covered dish is a requirement, but all meat and drinks will be supplied by the clubs.

I am also hoping for a good support of *GARS* members to do the security at the ARC hamfest on July 15 & 16. We need lots of people for Sunday. Contact Ike, KE4GYM or myself.

Support your club newsletter by getting to Dean, AD4OD an article of anything of your choice. Write us about any ham experience you have had, it doesn't have to be technical in nature. True to life experiences are always the best. I am sure we have many of you out there just dying to do this so you better get them in fast if you want them to be printed.

Remember - we meet at Captain Billy's Fish House in Duluth and we start eating at 5:00PM. We had a great crowd last month and I see no reason why we will not have another great crowd this nonth. Lets see if we can break our old record of 97?

73, Howie W4NVF
A Not Very Funny Production •

(Ham, continued from p.1)

His novice rig was all home brew and pretty much came out of "The Commander's" junk box. The transmitter was a 20 watt crystal rig with 2 tubes in the final and only worked 80 meters. Don couldn't remember what the tubes were but he thinks they were something like 6CL6's. The receiver was a super regenerative home brew with plug coils. The antenna was a Windom.

Continuing to be interested and active in amateur radio, Don upgraded to General about after about 18 months. (In those days the Novice license had a 2 year life and was not renewable). Don was 13 years old by this time. There is an interesting story about going to the FCC offices to take his test. (The VE system had not been invented yet).

Don had to go to New York City to the FCC offices which were just a couple of blocks from the World Trade Center. Unfortunately there was mix up as to what night the exams were being given and his parents had to return home (about 125 miles) with a very dejected young man who would have to wait to take his test. It took 2 more trips to New York City before he passed all of the elements for the General Class license.

Other rigs that Don had while he was in high school included an Eico 723 transmitter kit, a Johnson Ranger II and

a Galaxy V transceiver that he paid for himself with the proceeds from his newspaper delivery business. The Johnson Ranger was a Christmas present that came from his Elmer's estate.

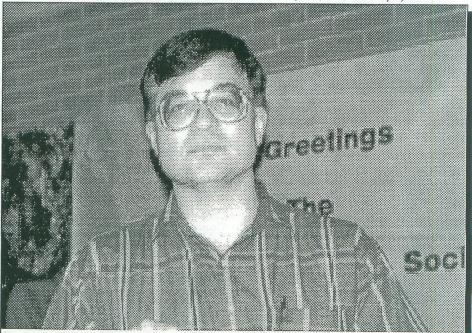
When Don was a senior in high school he built a Heath SB-102 five band transceiver and it almost worked on the first try. (he definitely had a technical orientation). All through his high school years, Don continued to use dipoles and other wire antennas. Don was active in the local amateur radio club and taught code to other students.

Other interests during his formative years included playing clarinet in the high school band and playing the piano; which he still does. (I think piano players make good CW operators).

After graduating from high school, Don went on to college at the University of Delaware where he was awarded a BSEE (electrical engineering). During this time he lived in Newark, Delaware and was fairly inactive in ham radio. During his senior year, however, Don had a fairly good schedule and with some time available, installed a ham station in the home of his future in-laws in Connecticut and was able to get in some operating time during school breaks.

During his Spring break in his last year at D.U. he went down to the

(Ham, continued on p.4)



Do you know this man? He is Vince Hrabosky, AE4CQ - this years *GARS* Field Day Chairman. Field Day was a resounding success this year, thanks to Vince and all those who helped him make our outing so great this year. Look for articles on this event in future issues of The Garzette.

(Ham, continued from p.4)

Customs House in Boston where the FCC was located and in a single sitting took all of the written and Morse code elements to gain the Extra Class license Don said he decided that he should go ahead with the written elements while all the technical stuff was still in his head from classes he had taken. He had been a predominately CW operator from the beginning because of the first rig that he had.

Don was recruited by the Raytheon Corporation of Wayland, MA. when he graduated from D.U. and became an electrical engineer for them specializing in micro wave antenna design. He designed radar antennas. During these years he was not real active on ham radio because of the limitations of living in an apartment.

Don moved on to Sanders Associates (also in the Boston area and whose ancestor was Squires Sanders of early two meter amateur radio fame) At this time he was still using the Heath SB-102 transceiver. Fortunately, financial and domestic geography were looking up about this time and Don purchased a new Kenwood TS-930. (The writer would like to have heard the rationalization for that acquisition). Don was on all bands and still using wire antennas. In 1986, took a position with Gabrielle Electronics and moved to Standish Maine. Interestingly mough, he bought the first house on the eet in the development that he and his wife had decided on and they were allowed to name the street. If you look Don up in any of the callbook databases, you will see that he lived on "Button Place" before he moved to the Atlanta area.

Things were really humming by now and Don decided to put up his first tower. He was really getting serious and put up a 70 foot tower with a 6 element Telrex TB6 Yagi on it. He also acquired an Alpha 86 linear (I think Johnny, W4WKP, has one of those) and really put in some operating time over the next few years. Don was now moving to predominately phone operation and he loved installed just for his new interest in interest in a serious production.

Don also built a 3 element monobander for 12 meters and published an article on it's construction in QST in October. 1988. He said that this was his favorite antenna and band many years since he had always been a CW enthusiast at heart.

The local club was the Portland Amateur Wireless Association and Don joined. He held several positions in the club including club secretary. He also became the Assistant Technical coordinator for ARRL Main Section. (By the way, Portland, Main was the home of the Vibroplex Corporation at one time).

During this time Don interviewed for a job at ARRL and received an offer as a testing laboratory engineers. Don had to turn the offer down for a number of reasons but he regrets that he missed the learning and challenges that such a position would have presented. He did get a chance to work the W1AW station and met several famous ARRL names in the hallway while he was there.

In October of 1994 Don accepted a position with EMS in Norcross and came

to Georgia. He designs cellular and PCS antennas. One of his associates there is Ike, KE4GYM our club Secretary.

Don is married to Gail who is an artist by trade. She is a former electronics assembler and built the work space in Don's incredible mobile satellite and HF station that he had at Field Day. This construction included the nylon straps that held up the work surfaces. She also made all of the wiring harnesses. (For those of you who missed Field Day, she is also a very good cookie maker)

Interestingly, Don recently became an member of the QCWA and was not even forty years old at that time. He also has achieved DXCC and WAS. He has the 25 wpm code proficiency certificate, belongs to the Rag Chewers Club and is an ARRL Life Member.

(Ham, continued on p.5)

#### **WORK GARS**

#### REPEATERS

2-Meter FM repeater 147.075 mHz +600 70-cm FM 444.525 +5mHz acc. tone-156.7

#### TELEPHONE BBS

GARS Conference in Sci-Atl BBS 806-7372

#### 6-METER BEACON

WA4IOB 6 Meter Beacon at 50.075mHz

#### **PACKET**

WD4JXR-6 / SNELLV Packet Node/Digipeater 145.03<sup>mHz</sup>

#### SWAP, WANTED and SELL NET

Tuesdays at 8:00PM on the *GARS* Repeater. 147.075<sup>mHz</sup>

#### MORSE CODE PRACTICE

An interactive Morse Code practice session follows the 8:00PM Tuesday night net on the *GARS* repeater, and on Thursdays at 9:00PM.

#### Contact GARS

#### **OFFICERS 1995-1996**

			1770 1770	
Preside	nt:	W4NVF	Howard Gould	921-8362
Vice Pre	s:	KD4QFD	Larry Osborne	381-5611
Secreta	ry:	KE4GYM	Ike Chapman	339-8123
Treasur	er:	WA4QYY	Charles Evans	448-0930
Activitie	s:	KA4KKF	David Adcock	963-5767

#### COMMITTEES

Editor:	AD4OD	Dean Matthews	962-8941				
Trustee:	KO4ZS	Paul Bennett	206-0215				
Awards:	AD4MI	Charles Robison	923-3610				

#### COMMITTEES, cont'd

		Publicity:		
Howard Could	021-8362	AD4PZ	Joe Biddle	963-4316
	321-0302	W4WKP	Johnny Fearon	466-4038
perators:		Rookie R	adio:	(ext. 354)
Larry Osborne	381-5611	1539		,
Jack Herndon	995-0438	AE4HN	Cheryl McClure \	263-0515
	Control of the Contro	Field Day	:	
		AF4CO	Vincent Hrabosky	246-9630
10000 - 10000 - 1000 -			,	
Duane Hansen	962-6086		The state of the s	
Howie Gould	921-8362	KA9UIE	Steve Idler	513-0428
Bob DeVeau	923-3963	HF/VHF/UHF Awards Manager:		
Ron Davidson	466-4932	KE4GGP	Don Ennest	923-4851
hip:		DXCC AW	ards Checker:	
Jack Herndon	995-0438	AF4Y	Frank Deak	978-6546
	Jack Herndon Joe Biddle Ike Chapman Duane Hansen Howie Gould Bob DeVeau Ron Davidson hip:	Derators:  Larry Osborne Jack Herndon Joe Biddle Ike Chapman Duane Hansen Howie Gould Bob DeVeau Ron Davidson  A81-5611 995-0438 995-0438 995-0438 995-0438 995-0438 995-0438 996-0438 992-316 992-6086 921-8362 923-3963 466-4932	Howard Gould   921-8362   AD4PZ   W4WKP   Rookie R   AE4HN   Field Day   AE4CQ   Ham Clas   Howie Gould   Bob DeVeau   Ron Davidson   Hip:   AE4G2   AE4G2   AE4G3   AE4CQ   AE4CQ   Ham Clas   AE4G3   AE4CQ   Ham Clas   A	Howard Gould P21-8362 W4WKP Johnny Fearon Rookie Radio:  Larry Osborne Jack Herndon Joe Biddle 963-4316 Ike Chapman Jouane Hansen Howie Gould Bob DeVeau Ron Davidson Home Rould P12-8362 Rookie Radio:  M4WKP Johnny Fearon Rookie Radio:  AE4HN Cheryl McClure Pield Day:  AE4CQ Vincent Hrabosky Ham Classes:  KA9UIE Steve Idler HF/VHF/UHF Awards Man KE4GGP Don Ennest DXCC Awards Checker:

#### (Ham, continued from p.4)

The present interest in a completely mobile station offering satellite, H.F. and UHF/VHF capability grew from a concern with typical neighborhood covenant problems. Don is finishing the complete mobile implementation which was in the process of construction on the morning of Field Day. He has done some rovering for UHF/VHF contests and is looking forward to even more activity in this area.

Primary equipment in the mobile installation is a FT-736 and an FT-900. He also has several antennas including a rotateable satellite antenna for mode a that is rotated through his sun roof using a HAM-M Tail Twister mounted between the two front seats of the Van. Don's desire is to able to work all modes on all bands from 160 meters through 432 mHz. mobile.

Don is looking forward to finishing the mobile station which he wants to be a whole variety of amateur radio capabilities all rolled into one installation. He is looking at possible ARES emergency use and would like to be able to drive up to a new ham's QTH and give them a taste of all the possibilities in ham radio before they start making decisions on what to get when they start upgrading or what they can do without even upgrading.

Don mentioned that he was attracted to *GARS* because of all the activity that was going on and he was also impressed with the courtesy and friendliness of the *GARS* repeater. Having lived on the East Coast for some time, Don says the difference is very dramatic.

If you have not had the pleasure of meeting Don, look him up at a *GARS* event and have a great eyeball QSO. Don is a great example of what can happen if you get into amateur radio as a youngster. It can really direct your career and the rest of your avocational time. I am sure that with his 25 years as a ham, Don will be able to contribute a number of great articles for the GARZETTE. There is no question that *GARS* is very fortunate to have a "professional" amateur .ike Don as one of it's members.

## Gwinnett Amateur Radio Society Monthly Meeting Minutes June 15, 1995

Officers in attendance:

President Howard Gould, W4NVF; Vice President Larry Osborne, KD4QFD, Secretary Ike Chapman, KE4GYM; Treasurer Charles Evans, WA4QYY; Activities Manager David Adcock, KA4KKF

The meeting was called to order by President Gould at Captain Billy's Seafood House in Duluth at 19:03 local time.

All members and visitors were invited to introduce themselves. There were a total of 58 persons signing the attendance record for the meeting.

As the first item on the agenda, Howie Gould, W4NVF read a letter from the Make A Wish Foundation from a child terminally ill trying to make a Guinness world record by receiving the most get well cards. The address will be posted on the S-A BBS and in the next edition of the GARZETTE.

Frank Deak, AF4Y gave an update on the FCC's progress toward opening the gates for vanity callsigns.

Eddie Faust, WD4JEM announced that a fox hunt on July 29, rain date of July 30, with the transmitters being launched in a balloon.

Carlton McPherson, WA4ZUW had questions about form MV-9 used for amateur radio license plates.

Vince Hrabosky, AE4CQ discussed final plans for *GARS* Field Day 1995 and the program for the evening was an ARRL video on field day.

After a short break, the secretary's minutes for the May meeting were approved as published in the June GARZETTE.

Charles Evans, WA4QYY, gave the treasurer's report.

Ike Chapman, KE4GYM, presented four applications for membership, a motion was made and seconded to accept the applicants as *GARS* members. The motion was passes without opposition. The new *GARS* members are: Richard Schaefer, KD4SHS; Marty Ernst, KD4HLV; Jesse Hein, KE4SZF; and Robert Bradford, KF4ACZ.

Ike Chapman, KE4GYM asked for volunteers to staff the security teams for the ARC hamfest on July 15 and 16 and passed around a sign up sheet.

A motion was made by Howie Gould, W4NVF for the club to get a flea market table at the ARC Hamfest to sell un-needed club equipment. The motion was seconded and passed without opposition.

The Rookie Radio discussion for the evening was the use of the phone patch and the 911 phone patch.

The HRO gift certificate was won by Dean Matthews, AD4OD.

The meeting was adjourned at 19:00 local time by President Gould. •

## QUA

#### 1st Tuesday,

Metro Atlanta Telephone Pioneers Old Hickory House 5490 Chamblee-Dunwoody Rd. in Dunwoody. Dutch dinner is at 6:30PM, followed by meeting. TI-145.41-

#### 1st Wednesday -HamWatch

Shoney's 11690 Alpharetta Hwy., Roswell (about 2 1/2 miles North of Holcomb Bridge Rd across from North Fulton Hospital) Dinner at 6:30PM. Meeting is at 7:30 PM

#### 1st Thursday

N.E. Georgia Amateur Radio Club Jefferson Civic Center, off Memorial Dr. toward Winder from Jefferson . Meeting is at 6:30PM. TI-147.225+

#### 1st Thursday -Atlanta Radio Club

Kitteredge Magnet School, North Druid Hills Rd. and Briarcliff. 6:00PM. Meeting is at 7:30PM TI-146.82-

#### 2nd Wednesday

North Fulton Radio League Cherokee Cattle Company, 11208 Alpharetta Hwy. Dinner at 6:00PM. Meeting at 7:30PM TI-145.47-

# 2nd Thursday Alford Memorial Radio Club Elks Lodge on Memorial Drive. Dinner at

Elks Lodge on Memorial Drive. Dinner at 6:00PM Meeting at 7:30PM. TI-146.76-

#### 2nd Saturday East Atlanta LAN

Scott Blvd Baptist Church in Decatur. Meeting is at 10:00AM. TI-145.41-

#### 3rd THURSDAY

Capt. Billy's Seafood, west of the mall on Pleasant Hill Rd. Fellowship buffet from 5:00PM to 7:00PM, meeting from 7:00PM to 9:00PM. TI-147.075+

## Rookie Radio Notes

by Cheryl McClure, AE4HN

Calling all hams interested in packet! John, KD6CLO, is starting a packet information net Wednesday nights at 8 P.M. on the *GARS* repeater (147.075+). This will be conducted by voice, not packet, so it will be great for all of us who are not yet on-line.

Those of you who are already on the air, join in and give us your opinion. Like all other aspects of amateur radio, ask 10 different hams the same question and you will get 10 different opinions. And all of them will be correct (Well, most of them anyway.) Bring all your questions and discussions and join in. You'll be digital in no time.

HowieLab II is still on hold. Ten-Tec has not released their 2 meter kits yet. Dean, AD4OD, has discovered a source for low cost HF QRP transceiver kits on the Internet. Class members? Would you be interested in switching? Let me know.

The Rookie Radio Hot-line has temporarily changed. Due to the fire at my home I will be staying at the Amberley Suites Hotel for about two months. My number there is 263-0515 (ext. 354).

Call me if you want to sign up for an antenna building class or have any ideas about other training you want to see offered. All we need are a few interested people and I will set up a class. •

# Ham Shack Lightning Protection

by Jack Taylor, N700

My tower is about 150 feet from the house, and I live in the country without very many alternative lightning paths around. Also, Arizona ranks about number two in the country for lightning strikes.

I have several coaxial feedlines coming down the tower and all have the shield bonded at the tower bottom just before entering a shallow trench leading to the house.

At the house there is a 10 ft length of 2 and one-half inch or so round metal galvanized pipe buried lengthwise a few inches below the ground. The coax enters this pipe, and at the house end the shields are all bonded to the pipe, before entering the house.

The end of the pipe is situated (where the soil conductivity is better) right below a rain water run-off point from the roof. There's also an 8 ft copper-clad ground rod attached to the shack end of the pipe. It's not necessary to bury the 'wave-guide beyond cut-off' pipe. I did so because it was convenient to my installation. I have seen them tucked under the eaves at the shack entry point.

In this installation the shack end was connected to a ground rod below it. In another, the pipe was mounted vertically at the tower base, and strapped to one leg of the tower, with the coax braids

(Lightning, continued on p.7)

7/95

#### REFURBISHED/NEW TEST EQUIPMENT

> Hewlett-Packard

➤ Sorensen

➤ Tektronics

> Wavetronic

> Fluke

≻Lambda

David E. Gile Jr., KG5TX

850 Dogwood Rd, Suite A400-546

Lawrenceville, Ga 30244

Voice: 736-9922

Fax: 985-4808

(Lightning, continued from p.6)

still being bonded at the output end of the pipe.

The bonding of the coaxial shields was done by stripping the plastic jacket back at the appropriate spots. One can use either the silver braid from RG-214, or copper braid for the bonding strap and use either stainless steel hardware, or 100 watt soldering iron, as appropriate.

I used a liberal amount of silicone grease over the exposed braids to prevent water from entering the jacket. (Silicone grease is also used by CATV types to seal F fittings and should work OK for this purpose on UHF and N fittings as well.)

I got this idea from an article in a 2-way radio magazine describing this method as being used by GE at their sites. They said the metal pipe acted as a "wavelength beyond cutoff filter" to lightning energy. It causes the lightning to not continue into the house.

I've had numerous nearby lightning strikes over the course of the 10 years this arrangement has been in use. I've had quite a few consumer electronics devices get zapped from conduction through the house electrical system and via the local TV antenna. I've even had the electric brake windings suffer insulation breakdown on the large prop-pitch motor that turns the TVRO dish. But I've never had damage to any of the gear connected to the coax feed system. Not yet, anyway.

This originated as an internet message, in the Ham-Tech list on AOL. With all the lightning strikes reported by GARS members recently I felt it was a timely topic, and wrote Jack for permission to reprint it here. He graciously consented an offered more details than was in his original text. - ED •

### WANTED

Carm Guerrazzi, K1CFW is looking for a 2m/440 mobile rig. He needs PL tone ability.

466-5311

## **More Good News**

by Pickett Cummins, AD4S

Most amateurs that have obtained older equipment without proper documentation have heard of HI Manuals of Council Bluffs Iowa. This company does not even have a telephone number listed under the company's name.

There is now quality competition in the old manual business. W7FG Vintage Manuals was founded in 1992 and their inventory, presentation and quality service is a dramatic change to what hams had to put up with in the past. W7FG has almost all of the Heath, Hammarlund, Drake, Swan, Johnson, Collins, and Hallicrafters manuals for amateur radio equipment. They also have many of the Dentron, Central Electronics, Gonset, B&W, Eico, National, WRL, Regency, RME and Tempo manuals.

In addition to these older pieces of equipment, manuals are available for most Kenwood, Icom, Alinco and Yaesu rigs. Their inventory includes manuals

(News, continued on p.8)



(News, continued from p.7)

for antennas, test equipment, scanners and many military communications components.

The copy process is absolutely first class and in the case of one manual that I ordered, I actually got the original manual itself. The manuals are all bound with a W7FG cover showing the manufacturer and model number. The prices are quite reasonable and a catalog is available.

W7FG can be reached for inquiries at 918-333-7893 and orders can be placed on a toll free line at 800-807-6146. (How about those last 4 numbers..?)

#### (Horse, continued from p.1)

Well, it sounds intimidating, but it's really not as bad as all that. I am definitely still a rookie at HF, but I've worked at it long enough to highlight the differences you will see when you first key up.

Fortunately, the new radios are more automatic and do not require as many adjustments as the old ones. If you anticipate buying a HF rig, keep this in mind. If you think you might have trouble making lots of adjustments, maybe you would be better off with the newest radio you can afford.

A simple example.... my new FT-900 will automatically select the proper side band for each ham band (i.e.-upper sideband for 20 meters and lower sideband for 40 meters). My older FT-767GX requires you to know which one you want. No big deal except when you are first starting out, little things like this will cause you the most grief. Some more are:

> It doesn't matter how high you set your power knob. If you forget to turn up your mic. gain, no one will hear you on phone. Your manual will describe how you need to set you audio drive so that it comes across without distortion.

> Be careful when using filters. If you forget that you left a button pushed the last time your rig was on, you will wonder why you can't hear anyone today.

> Tuning to the proper frequency in HF is an acquired skill. You may wonder

## World Famous

## KD4KCR Green Chili Recipe

Warning, this makes a BIG pot of mighty tasty Chili!

Ingredients:

2 Tbsp Olive Oil

- 2 Large Onions coarsely chopped (I just quarter mine and then cut the quarters in 3 or four pieces and break apart)
- 1 Clove of garlic crushed and chopped fine. If using fresh garlic, cut up the stems in 3 inch pieces and use them too.
- 2 lbs Ground Meat (This can be just about anything from turkey to rattle snake, Ground beef works well too! Coarsely ground is best.)

A handful of Corn Meal. About 1/2 cup

Black Pepper to taste, I use lots!

2 Large Cans whole peeled tomatoes.

- 2 Cans of Old El Paso Green Chilies, chopped or whole. If you get the whole ones, drain the can into the tomato mixture and then put the chilies on a cutting board and use the open can to chop em up.
- 1 large can of kidney beans (optional)

Instructions:

In a very large pot Sauté the Onions and Garlic in the olive oil till the onions are clear. Remove to a bowl. (Please don't brown the onions or garlic as this will make em bitter)

In same pot add the ground meat, cook till browned. If the meat is very lean, you may have to add some more olive oil and get it hot before adding the meat. While meat is browning, pour the tomatoes and chilies into another large bowl and use your hands to mash the tomatoes and blend in the chilies. Please do not use a machine as this will get it too fine and will rupture the tomato seeds and this will change the flavor of the chili.

When meat is browned, sprinkle the corn meal over the meat and stir till the corn meal is browned. Here again, you may have to add a little olive oil.

Add the onions back into the pot and stir. Add the chili / tomato mixture to the pot. Simmer for a few minutes but feel free to taste as you go along (cooks prerogative!) Add beans if you like.

Hey, whatcha waiting for, ring the dinner bell!

Get a big bag of tortilla chips and use these as edible spoons and eat the stuff right out of the pot!

I use this dish as a base for many other dishes. Try ladling this mixture over a flour tortilla, add some grated cheddar cheese and some raw onions and some fresh chopped tomatoes, add another tortilla, more chili, cheese, onions and tomatoes, another tortilla etc. till you think your eyes are bigger than your stomach and top with a good dollop of sour cream!

Make this dish with chopped chicken, pour in a casserole dish and pour your favorite corn bread recipe over the chili. Bake till cornbread is done. Be sure to add another can of chopped green chilies to the corn bread, heck, you can add a can of corn to the corn bread if you have a big bunch to feed!

For Red/Green Chili, add Chili Powder to taste, note, this will make it hotter. To make it hotter without making it red, add some jalapeno salsa (mmm good stuff!)

Hope you enjoy this, let me know about variations that you come up with. Next time, maybe I'll tempt you with my "Anything Goes" Stir Fry!

DE KD4KCR,
Duane at 2841 Eunice Holcomb Cir.
Dacula, Ga. 30211 ◆

(Horse, continued from p.8)

why everyone is ignoring you when you try to answer their CQ's. If you don't zero beat their frequency, your signal will be distorted when you speak.

Also, automatic antenna tuners can really make it easy to tune your antenna, but in my limited experience I have found that they just don't have the muscle of a manual tuner. No radio works well into an unmatched antenna. Newer rigs cut back on output power, and older rigs could burn up the finals (and a good chunk of cash) very quickly with a badly matched antenna. The best investment you can make to protect your expensive equipment is a SWR meter. Use it!

I know that real men don't read manuals, but trust me, this is the best place to start. You may not understand everything you read, but at least find the section that tells you the starting positions for all the knobs. Copy it and keep it handy. You will need it repeatedly.

You will see that there are different sets of buttons that need to be pushed depending on what mode you are operating (i.e.- phone, CW). If you switch between them, be sure you don't forget one. If things suddenly go wrong, go back to your basic starting positions. I'll bet you find a button or knob in the wrong position.

HF is a whole new animal. Oddly enough, the more you learn about HF, the more you comprehend about your simple 2 meter HT. All that theory you had to learn to pass your tests stops being just words and diagrams on a dusty page. Just wait till you make your first solo DX contact. It is AMAZING!

# Field Day 1995

## Another FB FD

by J. Pickett Cummins, AD4S

Another outstanding Field Day event was hosted by *GARS* on June 23rd and 24th. Field Day Chairperson, Vince Hrabosky - AE4CQ, really put on a show of organization.

We were located once again in the best field day site this long time participant writer has ever seen, Rhodes Jordan Park in Lawrenceville. Emergency power was supplied courtesy of Steve, KA9UIE, and Scientific Atlanta's mobile amateur radio trailer.

With some fear that one of the important contributors will be left out, the following club members really did yeoman duty in getting the stations installed and operating.

- 1. Duane, KD4KCR, and the Wire Antenna Team
- 2. Marty, KE4MLH, and the Tower Antenna Team
- 3. Jud, W4NZJ, and the RF Grounding Team
- 4. John, KE4KPV, and the Culinary Team
- 5. Joe, AD4PZ, and the one man Publicity Team
- 6. Pickett, AD4S, and the Logging and Reporting Team
- 7. Don, AJIT, and the Satellite Team

There are also several operators that need to be recognized for their long ses-

sions of operation and for putting significant numbers of contacts in the logs. Among these were Steve - AD4LY, Duane - KD4KCR, Dean - AD4OD, Johnny - W4WKP, Toshi - AD4ZZ and Joe - AD4PZ. There were many others that put in a significant amount of time and thanks to all of you for holding our QSO rate as high as it was. For those of you who didn't see Dean's MFJ Voice Keyer, it was quite the "contest thing". Dean said that he made 75% of his contacts without ever keying the mike.

Some highlights of getting ready include a real special addition to the event was the wire antenna construction class that Duane, KD4KCR taught while putting the operating radiators together on Saturday morning. Any new hams that are interested in getting on HF cheap should have been there. The RF Grounding Team, led by Jud, W4NZJ designed the system so that the ground rods could be left in place just below the earth's surface and a map was created so these same rods could be used next year.

Thanks are offered to John, KE4KPV, for his great food service. He was told that the KPV stood for Kitchen Patrol Volunteer when Field Day started. When the week end was finished, KPV stood for Kitchen Patrol Veteran. Supper was great and the breakfast was also served. Coffee and cold drinks were

(F-Day, continued on p.10) 12/95

12/95

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(F-Day, continued from p.9)

available throughout the event along with the "fat pills" (Dougnuts -ED) on Saturday morning.

Joe, AD4PZ, provided an excellent public relations table complete with guest log. The table was covered in Amateur Radio related literature as well as the *GARS* photo album and *GARS* membership applications. The large club sign and the *GARS* tower sign provided great advertising for Amateur Radio.

Picket, AD4S organized the logging process by creating beautiful log sheets that were turned into books by his team, simplifying the logging process greatly. After the event he compiled all the separate logs into one "duped" log to submit to the ARRL-ED

The following rigs were provided for general HF usage: TS-530-S, AD4S; FT-900's by KD4KCR and AD4ZZ; Ten Tec Scout, KD4KCR; SB-101, KD4KCR. Also Stan, WA4IZI, provided 15 meter phone coverage with his TS-50 in his motor home. A packet station was also available for part of the event.

One of the highlights of this year's event was the completely mobile station of Don, AJ1T. Don used his mini-van with a sun roof as a mobile emergency station. Don's van was equipped with a complete satellite station, an HF station and VHF/UHF station with associated radiators. The rigs were an FT-900 and IC-736. Don had crafted a wooden insert for his open sun roof through which he ran the rotating mast for his satellite station. A HAM-M Tail Twister was mounted on the hump between the two front seats. Don's wife had constructed two operating positions in the back seat complete with work surface.

The writer witnessed Don flailing away on 20 meter CW in considerable comfort. Don pointed out that his installation was a good dissertation on that fact that hams can work HF even if they have restrictive covenants at their residence. He also pointed out that a mobile HF station can get away from all of the man made static and interference that most of us have to put up with at our residences.

This implementation is still under development and it is Don's hope that he will be able to work all bands from 160 meters through 432 mHz from this

vehicle using completely self contained power. Hopefully Don will be able to bring this rolling example of conspicuous consumption to some of our demonstrations. Thanks for all the hard work Don, we really enjoyed it.

Marty, KE4MLH, and the "Rotating Radiator Team" did a great job. They got the *GARS* Tower up in fine shape and had the new 3 element TH-3 beam in service for the first time. A VHF vertical and 11 element Yagi were also installed on top of the tower which was raised to about the 40 foot level. One of the great moments of this installation was when Junior, KE4VWN put on his climbing gear and went up a couple of the trees to trim some limbs that were in the way of the HF antenna rotation.

72 of the 77 ARRL/CRRL Sections were worked during the event. The Sections not worked are always the most difficult and included Nevada, North West Territory, South Dakota, Saskatchewan and South Valley (CA). The Section that we worked the most was Ohio with 70 contacts.

The station that we worked the most was W4BBB at the ARC of Knoxville which we made 5 contacts with. Some local clubs that were identified in the logs that *GARS* contacted included:

W4AQL	Georgia Tech	1		
W4BOC	Alford Memorial	2		
AA4RC	North Fulton	2		
W4Q0	MATPARC .	1		
KD4HPD	Lee Flack	1		
(Lee was in the Club Category)				

Also noted were 2 contacts with W4IAX at the Mobile ARC. The interesting thing here is that call originally belonged to Hamilton Wentworth who was a good friend of Pickett, AD4S,

when he first got his license. As you can imagine, everyone called him "Ham".

We also worked W1AW at ARRL Headquarters twice.

Contacts were also noted with the following *GARS* members:

KR4XW.	Sid
KC4ZUA.	Arnold
KE4IHD.	Ralph
KE4VWP,	Paul
KD4VHG,	John
KE4QFW.	George

These contacts were made primarily when Ike, KE4GYM, grabbed the bull by the horns and made the necessary 10 VHF/UHF contacts to gain the 100 bonus points available. Also noted was a contact with W5CE, brother of Pickett, AD4S.

(F-Day, continued on p.11)

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(F-Day, continued from p.10)

Some of the interesting calls noted included:

VE2SEX (4 contacts)

K5DX

K9DC

N1FCC

N6QSO

N1NH (in NH)

N2YL

W6YL

W70M

W9QRS

W3USS (in the Nation's Capitol)

The most incredible station noted was N1NH which was working class 24A. Think about it, this means that more than one HF station had to be operating in the same band/mode with separate antennas all simultaneously.

Total contacts this year were 916 compared to 921 last year. Only 38 duplicates were found in the logs. This is pretty good when you take into account that dupe sheets were not used on two of the most popular bands. There were 406 CW contacts, 506 phone contacts and 4 packet contacts. We qualified for a power multiplier for all band/modes so the total QSO points were 2,636 compared to 2,480 last year. The increase was due to an increase in CW contacts which count twice as much as a phone contact.

We only missed 2 of the bonus point categories; natural power and ARRL messages handled. We gained 210 bonus points by copying the ARRL Field Day Message which instructed us to add 10 points for every ARRL member that made at least one contact.

Since the final score is only available from ARRL Headquarters after validation of bonus point evidence, we estimate that our final score will be very

close to 4,000 points compared to 3,080 points last year, (when we had one less station! -ED). This is a 30% increase and was achieved by paying attention to the details. Next year we will have to increase our contact rates.

The logs showed 28 *GARS* members actually operated during this event and we estimate that as many as 45 members visited the site. The visitors log showed 22 visitors. We even had what appeared to be a homeless person both days and he was noted eating our donuts and cookies.

A great time was had by all and from all the conversation on the repeater, next year will be even better. It certainly is going to take some doing to top the fun that we had this year. One of the thoughts that has come forward since Field Day is the possibility of breaking the HF stations into competing teams to help raise the overall QSO rate. I am sure that we will take advantage of all the technology and warm bodies we can to improve our score even more.

Thanks to all of those who made this a wonderful amateur radio experience and my apologies to anyone that I left out of this report. •

#### PACKET NET

Don't miss the KD6CLO packet net, Wednesdays at 8:00 PM on the *GARS* 147.075+ repeater.

Geared toward all levels of packet expertise, this net is a great place to get all your packet questions answered.

Join us for an interesting roundtable discussion on modern packet radio techniques.

#### **HEADPHONES**

by Paul Wilkins, AB4CY

The front panel of your receiver or transceiver has a phone jack, where you can plug in a pair of headphones. Doing so disables the built-in loudspeaker.

Use of headphones (also called earphones has several benefits. Headphones reduce noise so you can hear signals from the radio better. But they can also be a courtesy toward those who don't care for CW, ham chatter, or static.

Headphone elements evolved from magnetic telephone "receivers" still in use today. They were designed with several thousand ohms of resistance to match the high output impedance of a vacuum-tube amplifier.

"Crystal" phones, an exotic variation use piezoelectric crystals to produce sound. These phones have even higher impedance, and good frequency response-much better that magnetic phones, which typically "cut off" above 3500 Hz.

All of today's headphones are of the "dynamic" variety — built like miniature permanent-magnet loudspeakers. Their impedance is low — under twenty Ohms — for today's solid-state amplifiers.

In handheld or QRP ham gear, a major portion for battery capacity goes into driving a loudspeaker. Using headphones will yield at least twenty-five percent more battery life.

So of you don't use headphones, get a pair and try them. but be careful to keep the audio level down. Headphones can produce enough sonic energy to damage hearing over time.

From the Foundation for Amateur Radio "Auto-Call" via the ARNS Bulletin - ED ♦

WETT AMAJEL	GARS MEMBERSHIP APPLICATION (SHORTER FORM)				TAI T	
	Amateur Callsign:	Class:	Expires:/	/ Date of Birth:	1 1	1
O R	Name:			Home Phone:	-	
PROJO COCIET	Address:			Work-Phone:		
Olo socie	City/State/Zip:			Fax-Phone:		
Additional members for Family Me	emberships:	CALLSIGN:	CLASS (circle 1)	BIRTH DATE	ARRL Y/N	LIFE?Y/N
			EAGT+TN	//	[Y] [N]	[Y] [N]
			EAGT+TN	//	[Y] [N]	[Y] [N]
			_ EAGT+TN	//	[Y] [N]	[Y] [N]
Check Interests: ] -Class instruction [] -Field Day o ]Other	peration []-Repeater maintenance []	-GARS club booth staffing [ ]-Com	munity events []-Emergency [	]-Administrative [ ]-Fund rai	sers	
Oues: April 1 to Sept 30 25.00 for Individual Memberships 35.00 for Family Memberships	From Oct. 1 to Dec. 31: \$12.50 for Individual Membership \$17.50 for Family Memberships	From Jan 1 to March 31 \$6.25 for Individual Membership \$8.75 for Family Memberships	Type of membership: [ ]-Ind [ ]-Far Half price dues available for	mily Life?	Y/N	SPECIAL P SERVICE RE CLUB
	ation with check made out to		Radio Society, PO Box	88 Lilburn Ga 30226	Denuit	

## METRO AREA TEST SESSIONS

GARS Publishes Metro Area VE/VEC Exam Schedules as a service and is not responsible for errors or changes. Call and confirm schedules before going. All sessions are walk-in. Take copies of current license and certificate of completed elements with you to all sessions.

1st Sunday - 2:00PM - W5YI-VEC Duane Reynolds, WB2YAD - 623-9803 Jackson EMC, 461 Swanson Road, Lawrenceville

1st Monday - 7:30PM - Delaine McCarthy, KM4FV - 993-9758 Roswell ARRL-VEC St. Ann Catholic Church - 4905 Roswell Rd - Marietta

1st Saturday - 9:00AM - George White, KN4NG 361-6850 Clayton Co. Emergency Mgmt. Bldg. 7496 N. McDonough St. - Jonesboro

2nd Sundays - 3:00PM - Mike Mahaffey, AD4QB - 974-7710 First Presbyterian Church 183 West Main Street, Cartersville

2nd Tuesday - 7:00PM - Wayne Taylor, WD4CCA 498-7759 Walton EMC 3645 - Lenora Church Rd, Snellville

2nd Saturday - 8:30AM - Stn. Mtn. CA-VEC Hal Martin, KI4RD - 978-9160 Stone Mountain Methodist Church - 5312 West Mountain St., Stone Mtn.

3rd Saturdays - 9:00AM - Larry Huff, WA4CQZ - 955-3171 Marietta First United Methodist Church 56 Whitlock Ave, Room 319

4th Sunday- 2:30PM- N Atlanta ARRL/VEC- Steve Schmidt, KR4DL - 242-6142 Episcopal Church of the Atonement - Highpoint Rd, Atlanta

4th Tuesday - 7:00PM QRV ARRL-VEC Shirley Durham, KR4KO - 949-9025 United Way Service Center - 6279 Fairburn Road, Douglasville, GA

4th Friday GARS W5YI-VEC - 7:00PM - St. John Neumann Church 801 Tom Smith Rd, off Five Forks Trickum Rd, Lilburn Howie Gould, W4NVF 921-8362 Headphones!

#### HAMFEST CALENDAR

 July
 15-16
 Atlanta RC Hamfest, Atlanta, GA

 July
 29
 Hamfest, Ashville, NC

 Aug
 5?
 Hamfest, Perry, GA

 Aug
 5-6
 Hamfest, Jacksonville, FL

 Aug
 26?
 Hamfest - Confederate Sig Corps, Madison, GA

?=Date not confirmed. Several entries taken from SERA Journal. Georgia locations are bold, <u>Nearby locations are bold and underlined</u>

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combined

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The picnic's main dish and drinks will be provided by the clubs.

Bring along a covered side-dish for all to enjoy.

Take Hwy. 8 north (or I-85) to Winder and follow the signs. The park number is 867-3489, TI on 147.075+ (*GARS* repeater)

Contact Marty, KE4MLH at 945-0161 (days) or 682-5789 (evenings) *RIGHT AWAY* and let him know your are coming so he can order the right amount of food and drinks. •



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